

WHAT IS CLAIMED IS:

1. An ink comprising a mixture of (a) water, (b) a dye selected from the group consisting of diarylmethane derivatives, triarylmethane derivatives, methine dyes, and combinations thereof, and (c) a slow-evaporating solvent, wherein
5 said ink has a shear-thinning index in a range of about 0.35 to about 1.0.
2. The ink of claim 1, wherein said ink has a shear-thinning index in a range of about 0.5 to about 0.9.
3. The ink of claim 2, wherein said ink has a shear-thinning index in a range of about 0.6 to about 0.8.
- 10 4. The ink of claim 1, wherein said dye is selected from the group consisting of Auramine O, Basic Yellow 2, Basic Yellow 11, Basic Yellow 13, Basic Yellow 21, Basic Yellow 28, Basic Yellow 29, Basic Yellow 40, Acid Blue 22, Acid Blue 93, Acid Fuchsin, Acid Green, Acid Green 5, Acid Magenta, Acid Roseine, Acid Rubin, Acid Violet 17, Acid Violet 19, Alizarol Cyanin R, Aluminon, Aniline Blue
15 Ws, Basic Blue 8, Basic Blue 15, Basic Blue 20, Basic Blue 26, Basic Fuchsin, Basic Green 4, Basic Red 9, Basic Red 14, Basic Red 15, Basic Red 29, Basic Red 46, Basic Violet 2, Basic Violet 3, Basic Violet 4, Basic Violet 14, Chrome Violet Cg, Chromoxane Cyanin R, Cotton Blue, Crystal Violet, Dahlia, Diamond Green B, Eriochrome Cyanin R, Ethyl Green, Ethyl Violet, Fast Green Fcf, Food Green 3,
20 Gentian Violet, Helvetia Blue, Hoffman's Violet, Light Green, Lissamine Green Sf, Magenta 0, Magenta I, Magenta II, Magenta III, Malachite Green, Methyl Blue, Methyl Green, Methyl Violet, Methyl Violet 2b, Methyl Violet 10b, Mordant Blue 3, Mordant Violet 39, New Fuchsin, Night Blue, Pararosanilin, Primula, Rosanilin, Solochrome Cyanin R, Victoria Blue 4r, Victoria Blue B, Victoria Green B, Water
25 Blue I, and combinations thereof.
5. The ink of claim 1, wherein said dye is selected from the group consisting of Basic Red 14, Acid Violet 17, Basic Green 4 and combinations thereof.
6. The ink of claim 1, wherein said dye is present in an amount in

a range of about 0.01% to about 10% by weight of the total weight of the composition.

7. The ink of claim 6, wherein said dye is present in an amount in a range of about 0.1% to about 6% by weight of the total weight of the composition.

5 8. The ink of claim 1, wherein said ink comprises at least two dyes and said ink is black.

9. The ink of claim 8, wherein said dyes comprise a green dye and a dye selected from the group consisting of red dyes, violet dyes, and combinations thereof.

10 10. The ink of claim 9, comprising a red dye, wherein the weight ratio of said red dye to said green dye is in the range of about 10:1 about 1:10.

11. The ink of claim 10, comprising a red dye, wherein the weight ratio of said red dye to said green dye is in the range of about 4:1 to about 1:4.

15 12. The ink of claim 9, comprising a violet dye, wherein the weight ratio of said violet dye to said green dye is in the range of about 10:1 about 1:10.

13. The ink of claim 12, comprising a violet dye, wherein the weight ratio of said violet dye to said green dye is in the range of about 4:1 to about 1:4.

20 14. The ink of claim 9, wherein said black ink comprises a green dye in an amount in a range of about 25% to about 98% by weight, and a red dye in an amount in a range of about 2% to about 75% by weight, each based on the total weight of the dye in the composition.

25 15. The ink of claim 9, wherein said black ink comprises a green dye in an amount in a range of about 25% to about 98% by weight, and a violet dye in an amount in a range of about 2% to about 75% by weight, each based on the total weight of the dye in the composition.

16. The ink of claim 9, wherein said green dye is selected from the group consisting of Acid Green, Acid Green 5, Basic Green 4, Diamond Green B, Ethyl Green, Fast Green Fcf, Food Green 3, Light Green, Lissamine Green Sf, Malachite Green, Methyl Green, Victoria Green B, and combinations thereof; said red dye is selected from the group consisting of Basic Red 9, Basic Red 14, Basic Red 15, Basic Red 29, Basic Red 46, and combinations thereof; and said violet dye is selected from the group consisting of Acid Violet 17, Acid Violet 19, Basic Violet 2, Basic Violet 3, Basic Violet 4, Basic Violet 14, Chrome Violet Cg, Crystal Violet, Ethyl Violet, Gentian Violet, Hoffman's Violet, Methyl Violet, Methyl Violet 2b, Methyl Violet 10b, Mordant Violet 39, and combinations thereof.

17. The ink of claim 1, further comprising a gelling agent selected from the group consisting of polysaccharides and derivatives thereof, starches and derivatives thereof, hydrogels and derivatives thereof, silica gels and derivatives thereof, polyvinyl alcohol and derivatives thereof, and combinations of the foregoing.

18. The ink of claim 17, wherein said gelling agent comprises xanthan gum.

19. The ink of claim 17, wherein said gelling agent is present in an amount in a range of about 0.1% to about 10% by weight based on the total weight of the composition.

20. The ink of claim 1, further comprising a thickener selected from the group consisting of polyvinylpyrrolidone and copolymers thereof, polyvinylacetate and copolymers thereof, clays, talc, and combinations of the foregoing.

21. The ink of claim 20, wherein said thickener comprises polyvinylpyrrolidone.

22. The ink of claim 1, wherein said solvent is selected from the group consisting of glycols, ureas, fatty alcohols, dimethylformamide, dimethylsulfoxide, high molecular weight hydrocarbons, and combinations thereof.

23. The ink of claim 22, wherein said solvent comprises polyethylene glycol.

24. The ink of claim 1, wherein said solvent is present in an amount in a range of about 5% to about 30% by weight based on the total weight of the composition.

25. The ink of claim 24, wherein said solvent is present in an amount in a range of about 10% to about 20% by weight based on the total weight of the composition.

26. The ink of claim 1, further comprising an additive selected from the group consisting of pH buffers, surfactants, biocides, anticorrosive agents, sequestering agents, and combinations thereof.

27. A method of eradicating an ink, comprising the steps of applying an ink of claim 1 to a substrate to make a marking, and applying an eradicator fluid to said marking.

28. The method of claim 27, comprising applying said ink to paper.

29. The method of claim 27, wherein said eradicator fluid comprises an eradicator selected from the group consisting of a sulfite oxidizing agent, a bisulfite oxidizing agent, and combinations thereof.

30. An eradicable ink kit, comprising an ink of claim 1 and an eradicator fluid.

31. The kit of claim 30, wherein said eradicator fluid is selected from the group consisting of a sulfite oxidizing agent, a bisulfite oxidizing agent, and combinations thereof.

32. The kit of claim 30, wherein said ink is disposed in a writing instrument.

33. The kit of claim 32, wherein said writing instrument is a ball-point pen.

34. An eradicated ink complex, comprising a colorless or substantially colorless dye selected from the group consisting of oxidized diarylmethane derivatives, oxidized triarylmethane derivatives, oxidized methine dyes, and combinations thereof, and at least one of a gelling agent or a thickener.

35. The complex of claim 34, wherein said gelling agent is a polysaccharide.

36. A black eradicable ink, comprising a mixture of two or more dyes selected from the group consisting of diarylmethane derivatives, triarylmethane derivatives, methine dyes, and combinations thereof, wherein said mixture of dyes appears black in color.

37. A black eradicable gel ink, comprising a mixture of about 80% to about 90% water by weight based on the total weight of the composition;
a dye comprising
about 50% to about 98% of Basic Green 4,
about 1% to about 30% of Basic Red 14, and
about 1% to about 30% of Acid Violet 17, each by weight based on the total weight of the dye in the composition;
about 0.1% to about 5% xanthan gum by weight based on the total weight of the composition; and
about 10% to about 20% polyethyleneglycol by weight based on the total weight of the composition.

38. The ink of claim 37, wherein said dye is present in an amount in a range of about 0.1% to about 6% by weight of the total weight of the composition.